

Presentation to: Seminar

Location: Space Telescope Science Institute, Baltimore, MD

Dates: November 18, 2011

Title: “Eta Carinae--a demanding mistress”

Presenter: Theodore Gull

Abstract:

Over the past 15 years, a number of observers and modelers have increasingly focused on this massive system that is approaching its end stage, a supernova? a hypernova? When?

The discovery by Augusto Damineli that Eta Carinae had a 5.5-year period proved timely as the newly-installed STIS was primed to observe its properties in the visible and ultraviolet. Initial observations occurred on January 1998, and through multiple programs, including the multi-cycle Hubble Treasury program, have sampled changes across two cycles. Now a multi-cycle program, focused on mapping variations in the extended wind-wind collision zones through early 2015, will test 3-D models of the interacting winds.

In parallel, studies have been accomplished in X-rays with RXTE and CHANDRA, now in the far infrared with Herschel and from the ground with VLT.

Each new observation is helping to peel back the veil of mystery on this massive binary system, but also opening up more questions to be answered. Timely inclusion of laboratory studies and models have greatly enhanced the observational results. We will summarize the latest results including submitted papers and very recent results with Herschel.